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| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.      | CONFIRMATION NO. |
|---|-------------|----------------------|--------------------------|------------------|
| 09/598,814  | 06/21/2000  | Brian A. LaMacchia   | MS#154745.I/40062.65US03 | 5403             |
| 22801   | 7590        | 01/12/2005           | EXAMINER                 |                  |
| LEE & HAYES PLLC<br>421 W RIVERSIDE AVENUE SUITE 500<br>SPOKANE, WA 99201 |             |                      |                          | KIM, JUNG W      |
| ART UNIT  |             | PAPER NUMBER         |                          |                  |
| 2132  |             |                      |                          |                  |

DATE MAILED: 01/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                        |                  |
|------------------------------|------------------------|------------------|
| <b>Office Action Summary</b> | Application No.        | Applicant(s)     |
|                              | 09/598,814             | LAMACCHIA ET AL. |
|                              | Examiner<br>Jung W Kim | Art Unit<br>2132 |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 14 September 2004.
- 2a) This action is **FINAL**.                            2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-21 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 21 June 2000 is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) All    b) Some \* c) None of:
  1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |  |
|---|--|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                    | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)              |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____. | 6) <input type="checkbox"/> Other: _____.  |

**DETAILED ACTION**

1. Claims 1-21 have been examined. Applicant amended claims 1, 10-16 and 17 in the amendment filed on September 14, 2004.

***Response to Amendment***

2. The 112, second paragraph of claim 1 is withdrawn as the amendment overcomes the rejection.

***Response to Arguments***

3. Applicant's arguments filed September 14, 2004 have been fully considered but they are not persuasive.

4. Regarding applicant's argument that the level of trust associated with the digital signature of A does not depend on the condition of A's verifiable digital signature on B's key as taught in the Blaze prior art, specifically since Blaze teaches the user may specify the degree of trust that he has in each introducer, examiner disagrees. Any level of trust associated with a digital signature is inherently dependent on the verifiability of the digital signature, since the digital signature is only evidence of authorship/identity of the originator and not the verification thereof. Further, the fact that a user may specify the "degree of trust" taught in Blaze does not teach away from the dependency of the trust level of a digital signature to the verification condition (using a key to verify the digital signature) but in fact reinforces the notion of dependency found

in nested trust hierarchies such as PGP: user B associates a level of trust with an introducer A, and hence the trust level of the digital signature of introducer A is dependent on the trust level associated with user B's ability to verify the digital signature of introducer A.

5. Regarding applicant's argument that the prior art of record does not properly cover the limitation wherein the level of trust associated with a first evidence is independent of other evidence and conditions (see Remarks, pg. 14, 2<sup>nd</sup> full paragraph), examiner disagrees. The terms "dependence" and "independence" is interpreted in light of the instant application, specifically, on pg. 28, lines 4-5, wherein a host-stored key is defined as an exemplary element of evidence that is independent of any other evidence and conditions; and pg. 28, lines 15-18, wherein a signed certificate of a third-party, which can be verified by a host-stored key is defined as an exemplary element of evidence that is dependent upon other evidence and conditions. Based on this interpretation of the terms, the prior art of record does cover the scope of the claimed limitation.

6. For the aforementioned reasons, and those listed below, the claimed invention is covered by the prior art of record.

### ***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1-17 and 19-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Blaze et al. "Decentralized Trust Management" (hereinafter Blaze) in view of Gong U.S. Patent No. 6,044,467 (hereinafter Gong).

9. As per claim 1, Blaze discloses a method of associating a permission set with an action based on evidence characterized by different levels of trust (see Blaze, page 2, section 1.1, 'PGP system'; page 3, 3<sup>rd</sup> paragraph; page 3, 3<sup>rd</sup> paragraph, steps 1-7), the method comprising:

a. receiving at least a first condition and a first element of evidence, wherein the first condition is associated with the permission set and the level of trust associated with the first element of evidence is independent of other evidence and conditions, and determining whether the first condition is satisfied by the first element of evidence (see Blaze, page 3, 3<sup>rd</sup> paragraph, 3<sup>rd</sup> step; page 2, section 1.1, 'PGP' system', A's verifiable digital signature on B's key is the condition, and A's public/private key pair is evidence);

b. receiving at least a second condition and a second element of evidence, wherein the second condition is associated with the permission set and the level of trust associated with the second element is dependent upon the first condition, and determining whether the second condition is satisfied by the second element of evidence (see Blaze, page 3, 3<sup>rd</sup> paragraph, 3<sup>rd</sup> step; page 2, section 1.1,

'PGP system', A to verify trustworthiness of B's key is condition, and digital signature of A is evidence);

c. associating the permission set with the code assembly, if both the first condition and the second condition are satisfied (see Blaze, page 3, 3<sup>rd</sup> paragraph, steps 4-6).

10. Blaze does not expressly disclose associating a permission set with a code assembly. Gong discloses a means for secure class resolution, loading and definition; in particular, the classes loaded by a class loader are associated with a permission set (see Gong, Abstract; Figure 3). It would be obvious to one of ordinary skill in the art at the time the invention was made to apply the teaching of Gong to the method of Blaze. Motivation to combine enables security measures to restrict execution of code assemblies based on permission set and code membership. See Gong, col. 1, line 30-col. 2, line 65. The aforementioned cover the limitation of claim 1.

11. As per claims 2-5, Blaze covers a method as outlined above in the claim 1 rejection under 35 U.S.C. 103(a). In addition, the operation of receiving at least a first and second condition comprises:

a. receiving the first condition and the first element, and the second condition and the second element respectively, within a membership criterion (see Blaze, page 3, 3<sup>rd</sup> paragraph, steps 1 and 3 as modified by Gong, Figure 3, Reference No. 310); and

b. reading the first element and second element of evidence based on references in the membership criterion (see Blaze, page 2, section 1.1, 'A acts as an introducer of B to C' as modified by Gong, Figure 3, Reference Nos. 310 and 316).

The aforementioned cover the limitations of claims 2-5.

12. As per claim 6, Blaze covers a method as outlined above in the claim 1 rejection under 35 U.S.C. 103(a). In addition, the first condition applies the first element of evidence as implicitly trusted evidence used to validate the second element of evidence applied in the second condition (see Blaze, page 2, section 1.1, A's PublicKey, SecretKey pair). The aforementioned cover the limitations of claim 6.

13. As per claim 7, Blaze covers a method as outlined above in the claim 1 rejection under 35 U.S.C. 103(a). In addition, the second condition applies the second element of evidence as initially untrusted evidence (see Blaze, page 2, section 1.1, A signs B's keys). The aforementioned cover the limitations of claim 7.

14. As per claim 8, Blaze covers a method as outlined above in the claim 1 rejection under 35 U.S.C. 103(a). In addition, the method further comprises

- generating a collection of code groups, each code group being associated with a membership criterion and a permission set, wherein the first condition and

the second condition are received in the membership criterion associated with one of the code groups (see Gong, col. 11, line 57-col. 12, line 12; Figure 3); and

b. determining whether the code assembly is a member of the code group, based on the membership criterion (see Blaze, page 2, section 1.1, 'PGP system' as modified by Gong, Figure 2B).

The aforementioned cover the limitations of claim 8.

15. As per claim 9, Blaze covers a method as outlined above in the claim 8 rejection under 35 U.S.C. 103(a). In addition, the associating operation associates the permission set of the code group with the code assembly, if the code assembly is determined to be a member of the code group (see Blaze, page 3, 3<sup>rd</sup> paragraph, steps 1-4; see Gong, Figure 3). The aforementioned cover the limitations of claim 9.

16. As per claim 10, Blaze covers a method as outlined above in the claim 1 rejection under 35 U.S.C. 103(a). In addition, the concept of A acting as an introducer of B to C in the PGP system is recursive: B further acts as an introducer of C to a D if the trusted path deems a greater degree of separation from trusted certifier to certificate of public key in question (see Blaze, page 2, section 1.1, 'PGP system' and 'introducer'; page 3, 3<sup>rd</sup> paragraph, step 3). The aforementioned cover the limitations of claim 10.

17. As per claims 11-16, they are apparatus claims corresponding to claims 1-10 and they do not teach or define above the information claimed in claims 1-10. Therefore,

claims 11-16 are rejected as being unpatentable over Blaze in view of Gong for the same reasons set forth in the rejections of claims 1-10.

18. As per claim 17, Blaze covers a computer program product encoding a computer program for executing on a computer system a computer process for associating a permission set with a code assembly based on evidence characterized by different levels of trust as outlined above in the claim 1 rejection (see Blaze, pages 2 and 3 as modified by Gong, Figures 2B and 3). In addition, the computer process further comprises:

- a. receiving one or more first conditions, each first condition being associated with one or more first elements of evidence, wherein each first condition is associated with the permission set (see Blaze, page 2, section 1.1, 'PGP system', 'key rings', 'validity score'; page 3, 3<sup>rd</sup> paragraph, step 5);
- b. determining whether each first condition is satisfied by an associated first element of evidence (see Blaze, page 2, section 1.1, 'PGP system', 'A can sign B's key', 'A is an introducer of B to C');
- c. generating an indication for each first condition that is satisfied (see Blaze, page 2, section 1.1, 'PGP' system', 'judging validity score');
- d. receiving a second condition associated with the permission set and determining whether the second condition is satisfied based on the indications, wherein a level of trust associated with the indications depends upon a first

condition of the one or more first conditions (see Blaze, page 2, section 1.1, 'PGP system', 'uses key in the certificate if the score is high enough'); and

e. associating the permission set with the code assembly, if both the first condition and the second condition are satisfied (see Blaze, page 3, 3<sup>rd</sup> paragraph, steps 6 and 7).

The aforementioned cover the limitations of claim 17.

19. As per claim 19, Blaze covers a computer program as outlined above in the claim 17 rejection under 35 U.S.C. 103(a). In addition, at least one first element of evidence includes initially untrusted evidence (see Blaze, page 3, 3<sup>rd</sup> paragraph, step 1). The aforementioned cover the limitations of claim 19.

20. As per claim 20, Blaze covers a computer program as outlined above in the claim 17 rejection under 35 U.S.C. 103(a). In addition, at least one indication includes initially untrusted evidence (see Blaze, page 3, 3<sup>rd</sup> paragraph, step 1; page 2, section 1.1, 'PGP system', 'degree of trust', 'validity score'). The aforementioned cover the limitations of claim 20.

21. As per claim 21, Blaze covers a computer program as outlined above in the claim 17 rejection under 35 U.S.C. 103(a). In addition, inherent in a computer process that generates an indication for each satisfied first condition, is an indication for each first condition that is not satisfied. The aforementioned cover the limitations of claim 21.

22. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Blaze in view of Gong, and further in view of Itoh et al. U.S. Patent No. 6,052,678 (hereinafter Itoh).

23. As per claim 18, Blaze covers a computer program product as outlined above in the claim 17 rejection. Although Blaze does not disclose associating values to the conditions, summing the values, then evaluating the sum against a threshold to determine satisfiability; this process is a typical functional means to generate a result to indicate satisfiability or unsatisfiability. For example, Itoh teaches such steps in a problem solving operation apparatus using state transition (see Itoh, col. 8, 25-35). It would be obvious to one of ordinary skill in the art at the time the invention was made to apply the teaching of Itoh to the apparatus covered by Blaze. Motivation to combine enables standard functional means to determine satisfiability or unsatisfiability of a set of conditions. The aforementioned cover the limitations of claim 18.

### ***Conclusion***

24. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jung W Kim whose telephone number is (571) 272-3804. The examiner can normally be reached on M-F 9:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gilberto Barron can be reached on (571) 272-3799. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Jung W Kim  
Examiner  
Art Unit 2132

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